CLAIMS

The invention claimed is:

1. A rearview assembly for a vehicle comprising:

a mirror mounting structure including a mirror housing and adapted to be mounted to the vehicle; and

an antenna for a wireless telephone mounted to said mirror mounting structure.

2. The rearview mirror assembly of claim 1, wherein said antenna is mounted to said mirror housing.

3. The rearview mirror assembly of claim 1 and further including:

electronic circuitry contained in said mirror housing; and

an electromagnetic shield provided between said electronic circuitry and said antenna to substantially block electromagnetic radiation generated by said electronic circuitry from reaching said antenna.

4. The rearview mirror assembly of claim 3, wherein said electromagnetic shield is electrically coupled to a ground of said antenna to function as a ground plane.

5. The rearview mirror assembly of claim 3, wherein said electromagnetic shield includes a conductive coating on an inside surface of said mirror housing.

6. The rearview mirror assembly of claim 5, wherein said mirror housing includes an aperture extending from an outside surface of said housing to the inside of said housing and through said conductive coating, said antenna is part of an antenna structure that is mounted to said mirror housing, and a portion of said antenna structure extends through said aperture.

7. The rearview mirror assembly of claim 6, wherein at least one electrical lead from said antenna extends through said aperture.

8. The rearview mirror assembly of claim 3, wherein said electronic circuitry is disposed between two circuit boards, and wherein said electromagnetic shield includes a shielding gasket disposed between the two circuit boards and surrounding said electronic circuitry.

9. The rearview mirror assembly of claim 3, wherein said mirror housing exhibits an electromagnetic interference level less than about 41 dBμV/m for emissions in the frequency range from about 0.4 MHz to about 20 MHz.

10. The rearview mirror assembly of claim 1, wherein said antenna is coupled to a telephone transceiver mounted in said mirror housing.

11. The rearview mirror assembly of claim 1, wherein said antenna is coupled to an audio and data RF transceiver mounted in said mirror housing.

12. The rearview mirror assembly of claim 1, wherein said antenna is coupled to a remote keyless entry receiver mounted in said mirror housing.

13. The rearview mirror assembly of claim 1, wherein said antenna is coupled to a transmitter mounted in said mirror housing for transmitting garage door opener signals.

14. The rearview mirror assembly of claim 1, wherein said antenna is a broadband antenna.

15. The rearview mirror assembly of claim 1, wherein said antenna is substantially transparent.

16. A rearview mirror assembly for a vehicle comprising:

a mirror mounting structure including a mirror housing and adapted to be mounted to the vehicle; and

a speech synthesizer circuit carried by said mirror mounting structure, for generating synthesized voice audio signals.

17. The rearview mirror assembly of claim 16, wherein said speech synthesizer circuit is disposed within said mirror housing.

18. The rearview mirror assembly of claim 16, wherein said speech synthesizer circuit is in communication with a voice recognition circuit.

19. The rearview mirror assembly of claim 18, wherein said voice recognition circuit is carried by said mirror mounting structure.

20. The rearview mirror assembly of claim 19, wherein said speech synthesizer circuit is disposed within said mirror housing.

21. The rearview mirror assembly of claim 18, wherein said speech synthesizer circuit is in communication with a wireless telephone transceiver for transmitting the synthesized voice audio signals over a wireless telephone link.

22. The rearview mirror assembly of claim 21, wherein said voice recognition circuit is coupled to a microphone, receives voice signals from a vehicle occupant, performs voice recognition on the received voice signals, and supplies data representing the recognized voice signals to said speech synthesizer circuit, which generates and supplies synthesized voice audio signals to said wireless telephone transceiver representing the recognized voice signals from the vehicle occupant.

23. The rearview mirror assembly of claim 16, wherein said speech synthesizer is in communication with a vehicle audio system.

24. The rearview mirror assembly of claim 23, wherein said speech synthesizer is coupled to a wireless transmitter that transmits the synthesized speech signals to a receiver that is coupled to the vehicle audio system.

25. A rearview mirror assembly for a vehicle comprising:

a mirror mounting structure including a mirror housing and adapted to be mounted to the vehicle; and

a voice recognition circuit carried by said mirror mounting structure and coupled to a microphone for receiving voice signals from a vehicle occupant, performs voice recognition on the received voice signals, and generates data representing the recognized voice signals.

26. The rearview mirror assembly of claim 25, wherein said voice recognition circuit is disposed within said mirror housing.

27. The rearview mirror assembly of claim 25, wherein said voice recognition circuit is in communication with a speech synthesizer circuit.

28. The rearview mirror assembly of claim 27, wherein said speech synthesizer circuit is carried by said mirror mounting structure.

29. The rearview mirror assembly of claim 28, wherein said speech synthesizer circuit is disposed within said mirror housing.

30. The rearview mirror assembly of claim 25, wherein said voice recognition circuit is in communication with a wireless voice/data RF transceiver performing voice recognition on a voice signal received from said wireless voice/data RF transceiver.

31. The rearview mirror assembly of claim 30 and further including a control circuit coupled to said voice recognition circuit for generating control signals in response to voice commands recognized by said voice recognition circuit.

32. The rearview mirror assembly of claim 31, wherein said wireless voice/data RF transceiver receives voice signals from a portable telephone.

33. The rearview mirror assembly of claim 31, wherein said wireless voice/data RF transceiver receives voice signals from a headset having a microphone and a wireless voice/data RF transmitter.

34. A rearview mirror assembly for a vehicle having an audio system, said mirror assembly comprising:

mirror mounting structure including a mirror housing and adapted to be mounted to the vehicle;

an audio source of audio signals carried by said mirror mounting structure; and

a wireless audio/data RF transmitter carried by said mirror mounting structure and coupled to said audio source for transmitting audio signals received from said audio source via a wireless link to a receiver coupled to the audio system for playback on the vehicle's audio system.

35. The rearview mirror assembly of claim 34, wherein said audio source includes a CD radio antenna for receiving audio signals from satellites.

36. The rearview mirror assembly of claim 34, wherein said audio source includes a speech synthesizer.

37. The rearview mirror assembly of claim 34, wherein said audio source includes a telephone transceiver.

38. The rearview mirror assembly of claim 34 and further including an antenna mounted to said mirror mounting structure and electrically coupled to said wireless audio/data RF transmitter.

39. An electrical circuit for a vehicle comprising:

at least one microphone transducer for generating an electrical signal representing a received audio signal;

a processing circuit coupled to said microphone transducer for processing the electrical signal;

a voice recognition circuit coupled to said processing circuit for performing voice recognition on the processed electrical signals generated by said processing circuit; and

a wireless telephone transceiver coupled to said processing circuit for transmitting the processed electrical signal through a wireless telephone link,

wherein said processing circuit processes the electrical signal received from said microphone transducer differently for output to said voice recognition circuit than for output to said wireless telephone transceiver.

40. The electrical circuit of claim 39, wherein said processing circuit includes a first output terminal coupled to said wireless telephone transceiver and a second output terminal coupled to said voice recognition circuit.

41. The electrical circuit of claim 39, wherein said processing circuit includes a digital signal processor.

42. The electrical circuit of claim 39, wherein at least one of said voice recognition circuit, processing circuit, microphone transducer, and wireless telephone transceiver is supported by a rearview mirror assembly mounted to the vehicle.

43. A telephone system for a vehicle comprising:

a microphone;

a telephone transceiver coupled to said microphone, said telephone transceiver transmits and receives voice signals via a wireless communication link; and

a voice recognition circuit coupled to said microphone and said telephone transceiver, said voice recognition circuit recognizes spoken words received through said microphone and transmits a signal to said telephone transceiver pertaining to the recognized spoken words, and wherein said telephone transceiver transmits information over the wireless communication link in response to the signal received from said voice recognition circuit during a telephone call.

44. The telephone system of claim 43, wherein the information transmitted by said telephone transceiver includes one or more DTMF tones that are transmitted over the wireless communication link in response to the information transmitted from the voice recognition circuit.

45. The telephone system of claim 43 and further including a speech synthesizer circuit coupled to said telephone transceiver and said voice recognition circuit, wherein the information transmitted by said telephone transceiver includes one or more synthesized words generated by said speech synthesizer that is transmitted over the wireless communication link in response to the information transmitted from the voice recognition circuit.

46. The telephone system of claim 45, wherein said speech synthesizer synthesizes words corresponding to the spoken words recognized by said voice recognition circuit.

47. The telephone system of claim 43, wherein the information transmitted by said telephone transceiver includes data used to assist a remote voice recognition system to recognize the spoken words received through said microphone.

48. The telephone system of claim 43, wherein said telephone transceiver transmits the information while a telephone call to a remote system having voice recognition is in progress such that the information may be used for voice recognition by the remote system.

49. The telephone system of claim 43, wherein at least one of said microphone, telephone transceiver, and voice recognition circuit is associated with a rearview mirror assembly of a vehicle.

50. A rearview mirror assembly for a vehicle comprising:

a mirror mounting structure adapted to be attached to the vehicle;

an electronic circuit mounted to said mirror mounting structure; and

a battery mounted within said mirror mounting structure for supplying power to said electronic circuit.

51. The rearview mirror assembly of claim 50, wherein said electronic circuit includes a terminal for receiving power from a vehicle battery or ignition, and said electronic circuit draws power from said battery when power is not available from the vehicle battery or ignition.

52. The rearview mirror assembly of claim 50, wherein said mirror mounting structure includes a mirror housing and said battery is mounted in said mirror housing.

53. The rearview mirror assembly of claim 52, wherein said electronic circuit is mounted in said mirror housing.

54. The rearview mirror assembly of claim 50, wherein said mirror mounting structure includes a mirror housing and said electronic circuit is mounted in said mirror housing.

55. The rearview mirror assembly of claim 50, wherein said electronic circuit includes a telephone transceiver, wherein said battery provides power to said telephone transceiver when power from the vehicle battery or ignition is disrupted, and said telephone transceiver is configured to make a distress call while drawing power from said battery.

56. The rearview mirror assembly of claim 50, wherein said telephone transceiver transmits vehicle location while making a distress call.

57. The rearview mirror assembly of claim 50 and further including a heater mounted to said mirror support structure for heating said battery.

58. An electronic vehicle accessory comprising:

an electronic circuit configured to receive power from a vehicle battery or ignition;

a back-up battery for providing power to said electronic circuit when power from the vehicle battery or ignition is disrupted; and

a heater circuit for heating said back-up battery.

59. A rearview mirror assembly for a vehicle comprising:

a mirror mounting structure adapted to be attached to the vehicle;

a telephone transceiver mounted within said mirror mounting structure; and

an energy storage device mounted within said mirror mounting structure for supplying power to said telephone transceiver.

60. The rearview mirror assembly of claim 59, wherein said mirror mounting structure includes a mirror housing, and said telephone transceiver is mounted in said mirror housing.

61. The rearview mirror assembly of claim 59, wherein said energy storage device is a battery.

62. The rearview mirror assembly of claim 59 and further including a heater for heating said battery.

63. The rearview mirror assembly of claim 59, wherein said energy storage device includes a capacitor.

64. A vehicle accessory telephone system comprising:

an accessory housing;

a telephone transceiver mounted in said accessory housing and configured to receive power from a vehicle battery or ignition; and

a back-up energy source mounted in said accessory housing for providing power to said telephone transceiver to enable said telephone transceiver to transmit a distress call when power from the vehicle battery or ignition is disrupted.

65. A telematics system for installation in a vehicle having an electronic module configured to control a feature of the vehicle that affects the ability of the vehicle to be driven, said telematics system comprising:

a global position identification component for identifying the location of the vehicle;

a telephone transceiver component coupled to said global position identification component for transmitting the location of the vehicle to a remote system; and

a controller component coupled to said global position identification component and said telephone transceiver component,

wherein at least one of said components is configured to periodically communicate with the electronic module and to thereby acknowledge that each of said components is present and functional such that if the electronic module does not receive periodic acknowledgement of the presence and/or functionality of said components, the electronic module affects the ability of the vehicle to be driven.

66. The telematics system of claim 65, wherein said at least one component is said controller component, wherein said controller component verifies the presence and status of said telephone transceiver component and said global position identification component.

67. The telematics system of claim 66, wherein said controller component periodically transmits a signal to the electronic module to acknowledge the presence and status of the telematics system.

68. The telematics system of claim 66, wherein said controller component responds to periodic polling signals from the electronic module to acknowledge the presence and status of the telematics system.

69. The telematics system of claim 65, wherein said at least one component and the electronic module communicate with one another using a rolling code sequence.

70. The telematics system of claim 65, wherein at least one of said components is associated with a rearview mirror assembly of the vehicle.

71. The telematics system of claim 65, wherein all of said components are associated with a rearview mirror assembly of the vehicle.

72. The telematics system of claim 65 and further including a battery back-up to allow a distress call to be made when power is otherwise disrupted to the telematics system.

73. The telematics system of claim 65 and further including a telephone antenna coupled to said telephone transceiver component.

74. The telematics system of claim 73, wherein said antenna is mounted to a rearview mirror assembly of the vehicle.

75. The telematics system of claim 65, wherein the electronic module disables the vehicle upon detection that one of said components is not present or non-functional.

76. A telematics system for installation in a vehicle having an electronic module configured to control the ignition of the vehicle, said telematics system comprising:

a global position identification component for identifying the location of the vehicle;

a telephone transceiver component coupled to said global position identification component for transmitting the location of the vehicle to a remote system; and

a controller component coupled to said global position identification component and said telephone transceiver component,

wherein at least one of said components is configured to communicate with the electronic module and to thereby acknowledge that each of said components is present and functional such that if the electronic module does not receive acknowledgement of the presence and/or functionality of said components, the electronic module disables the vehicle ignition.

77. A telephone system for installation in a vehicle having an electronic module for determining whether an ignition key has been inserted into the vehicle ignition and for communicating the presence of the key in the ignition, said telephone system comprising:

a telephone transceiver for transmitting calls over a wireless communication link; and

a control circuit coupled to said telephone transceiver and in communication with the electronic module, said control circuit disables at least some functions of said telephone transceiver when an ignition key is not detected in the vehicle ignition.

78. The telephone system of claim 77, wherein said control circuit disables the ability of the telephone system to make at least some calls using said telephone transceiver.

79. The telephone system of claim 77, wherein said control circuit disables the ability to make calls to telephone numbers not previously stored in a memory component of said control circuit.

80. A telephone system for a vehicle comprising:

a telephone transceiver mounted to the vehicle;

an audio and data transceiver for receiving audio and data signals from a portable telephone associated with the vehicle;

a microwave receiver for receiving satellite signals from which the location of the vehicle may be identified; and

a control circuit coupled to said microwave receiver, said audio and data transceiver, and said telephone transceiver, said control circuit controls operation of said telephone transceiver and selectively enables and disables certain functions of the telephone system in response to information obtained from said microwave receiver.

81. The telephone system of claim 80 and further including a microphone mounted in the vehicle and coupled to said telephone transceiver.

82. The telephone system of claim 81 and further including a speaker mounted in the vehicle and coupled to said telephone transceiver.

83. The telephone system of claim 80, wherein said control circuit causes said audio and data transceiver to transmit a control signal to the portable telephone to transfer any on-going telephone calls from the portable telephone to said telephone transceiver and to disable further use of the portable telephone in the vehicle.

84. The telephone system of claim 80, wherein the information obtained from the microwave receiver is whether the vehicle is moving.

85. The telephone system of claim 80, wherein the information obtained from the microwave receiver is the location of the vehicle.

86. The telephone system of claim 80, wherein the information obtained from the microwave receiver is the speed at which the vehicle is traveling.

87. The telephone system of claim 80, wherein the function performed by said control circuit is disablement of said telephone transceiver.

88. The telephone system of claim 80, wherein the function performed by said control circuit is disablement of said telephone transceiver with the exception of calls made to a predetermined emergency service operator.

89. A telephone system for a vehicle comprising:

a telephone transceiver mounted to the vehicle;

a hands-free microphone coupled to said telephone transceiver;

at least one hands-free speaker coupled to said telephone transceiver;

an audio and data transceiver for receiving audio and data signals from a portable telephone associated with the vehicle; and

a control circuit coupled to said audio and data transceiver and said telephone transceiver, said control circuit determines whether a portable telephone having a predetermined identification number is within the range of said audio and data transceiver and exchanges data with the portable telephone through said audio and data transceiver, said control circuit selectively performs functions in response to the data exchanged with the portable telephone.

90. The vehicle telephone system of claim 89, wherein said control circuit selectively assumes control of a telephone call received or initiated by the portable telephone when the portable telephone is within range of said audio and data transceiver.

91. The vehicle telephone system of claim 90, wherein said control circuit assumes control of a telephone call received or initiated by the portable telephone as soon as the portable telephone is within range of said audio and data transceiver.

92. The vehicle telephone system of claim 90 and further including a call transfer switch coupled to said control circuit, wherein said control circuit assumes control of a telephone call received or initiated by the portable telephone in response to an activation of said call transfer switch.

93. The vehicle telephone system of claim 90, wherein said control circuit assumes control of a telephone call received or initiated by the portable telephone as soon as said control circuit detects that the vehicle ignition has been turned on.

94. The vehicle telephone system of claim 90, wherein said control circuit assumes control of a telephone call received or initiated by the portable telephone as soon as said control circuit detects that the vehicle is moving.

95. The vehicle telephone system of claim 90, wherein said control circuit assumes control of a telephone call received or initiated by the portable telephone as soon as said control circuit detects that the vehicle is traveling at a speed exceeding a predetermined threshold speed.

96. The vehicle telephone system of claim 90, wherein said control circuit assumes control of a telephone call received or initiated by the portable telephone as soon as said control circuit detects that a person using the portable telephone is within the vehicle.

97. The vehicle telephone system of claim 89, wherein said control circuit causes voice signals received from a microphone on the portable telephone to be transferred to said audio and data transceiver for transmission through said telephone transceiver in the vehicle.

98. The vehicle telephone system of claim 89, wherein said control circuit enables said audio and data transceiver to receive data entered through a keypad on the portable telephone and wherein said control circuit performs control functions in response to data entered through the portable telephone keypad.

99. The vehicle telephone system of claim 89, wherein said control circuit exchanges data with the portable telephone through the audio and data transceiver causing the portable telephone to disable its microphone, wherein said control circuit enables speech to be picked up by said hands-free microphone and transmitted to a called party through said telephone transceiver.

100. The vehicle telephone system of claim 89, wherein said control circuit exchanges data with the portable telephone through the audio and data transceiver causing the portable telephone to disable its microphone, wherein said control circuit enables speech to be picked up by said hands-free microphone and transmitted to a called party through said audio and data transceiver and a transceiver provided in the portable telephone.

101. The vehicle telephone system of claim 89, wherein said control circuit exchanges data with the portable telephone through the audio and data transceiver causing the portable telephone to disable its speaker, wherein said control circuit enables audio signals from called party that are received through said telephone transceiver to be played back over said hands-free speaker.

102. The vehicle telephone system of claim 89, wherein said control circuit exchanges data with the portable telephone through the audio and data transceiver causing the portable telephone to disable its speaker, wherein said control circuit enables audio signals received

through a transceiver provided in the portable telephone and through said audio and data transceiver to be played back over said hands-free speaker.

103. The vehicle telephone system of claim 89, wherein said at least one hands-free speaker includes at least one speaker of vehicle audio system.

104. The vehicle telephone system of claim 89, wherein said control circuit enables said audio and data transceiver to receive audio signals received through a microphone on the portable telephone.

105. The vehicle telephone system of claim 104 and further including a voice recognition circuit coupled to said audio and data transceiver and to said control circuit, wherein said control circuit performs control functions in response to audio commands received by said audio and data transceiver from the portable telephone.

106. The vehicle telephone system of claim 89, wherein at least one of said telephone transceiver, audio and data transceiver, and control circuit is supported on or within a rearview assembly of the vehicle that provides an image of a scene to the rear of the driver of the vehicle.

107. The vehicle telephone system of claim 106, wherein each of said telephone transceiver, audio and data transceiver, and control circuit is supported on or within said rearview assembly.

108. The vehicle telephone system of claim 89, wherein said control circuit transfers any control for functions it had assumed from the portable telephone back to the portable telephone upon the occurrence of a predetermined event.

109. The vehicle telephone system of claim 108, wherein the predetermined event is the detection by said control circuit that the person using the telephone has exited the vehicle.

110. The vehicle telephone system of claim 109, wherein said control circuit determines that the person using the telephone has exited the vehicle when said control circuit detects that a door of the vehicle has been opened.

111. The vehicle telephone system of claim 108, wherein the predetermined event is the detection by said control circuit that the vehicle ignition has been turned off.

112. The vehicle telephone system of claim 108 and further including a call transfer switch, wherein the predetermined event is the actuation of said call transfer switch.

113. The vehicle telephone system of claim 108, wherein the predetermined event is the detection by said control circuit that an airbag within the vehicle has been deployed.

114. The vehicle telephone system of claim 89, wherein said control circuit enables both said telephone transceiver and the portable telephone to be utilized upon detection that an airbag within the vehicle has been deployed.

115. The vehicle telephone system of claim 89, wherein said control circuit is configured to exchange data with more than one portable telephone through said audio and data transceiver.

116. A vehicle rearview assembly for providing an image of a scene to the rear of the driver of the vehicle, said rearview assembly comprising:

a mounting structure for mounting to the vehicle;

an audio and data transceiver supported by said mounting structure, capable of receiving both audio and data signals from at least one remote device associated with the vehicle;

a control circuit coupled to said audio and data transceiver, said control circuit processes a data signal received by said audio and data transceiver that are received from a remote device associated with the vehicle, and generates a control signal in response to such a data signal.

117. The vehicle rearview assembly of claim 116, wherein said audio and data transceiver is configured to receive a data signal from a remote RF ID device tag associated with the vehicle.

118. The vehicle rearview assembly of claim 117, wherein the remote RF ID device tag is provided on a vehicle ignition key associated with the vehicle.

119. The vehicle rearview assembly of claim 118, wherein said control circuit enables the vehicle ignition to be turned on by the vehicle ignition key upon detection that the remote RF ID device tag is within range of said audio and data transceiver.

120. The vehicle rearview assembly of claim 117, wherein said control circuit generates a control signal to unlock doors of the vehicle upon detecting that the remote RF ID device tag is within range of said audio and data transceiver.

121. The vehicle rearview assembly of claim 116, wherein said control circuit responds to a data signal received from a remote device associated with the vehicle by personalizing vehicle accessories in accordance with previously stored criteria associated with a personal identification code transmitted in the data signal.

122. The vehicle rearview assembly of claim 121, wherein said control circuit adjusts at least one of (a) a vehicle seat position, (b) a vehicle mirror position, (c) vehicle telephone presets, and (d) vehicle radio presets, in response to a data signal having a particular personal identification code.

123. The vehicle rearview assembly of claim 116, wherein said audio and data transceiver is configured to receive a data signal from a remote portable telephone associated with the vehicle.

124. The vehicle rearview assembly of claim 123, wherein said control circuit generates a control signal to unlock doors of the vehicle upon detecting that the portable telephone is within range of said audio and data transceiver.

125. The vehicle rearview assembly of claim 123, wherein said control circuit generates a control signal to unlock doors of the vehicle upon detecting a sequence of numbers that are entered into the portable telephone through its keypad and subsequently transmitted to said audio and data transceiver.

126. The vehicle rearview assembly of claim 123 and further including a voice recognition circuit coupled to said audio and data transceiver and to said control circuit, wherein said control circuit generates a control signal to unlock doors of the vehicle upon said voice recognition unit detecting a corresponding voice command received from the portable telephone through said audio and data transceiver.

127. A vehicle rearview assembly for providing an image of a scene to the rear of a driver, said rearview assembly comprising:

a mounting structure for mounting to the vehicle; and

a telephone transceiver supported by the mounting structure,

wherein said rearview assembly exhibits an electromagnetic interference level less than about 61 dBμV/m for emissions in the frequency range from about 0.4 MHz to about 20 MHz.

128. The vehicle rearview assembly of claim 127, wherein said mounting structure includes a housing in which said telephone transceiver is mounted.

129. The vehicle rearview assembly of claim 128, wherein said housing includes an electrically conductive layer.

130. The vehicle rearview assembly of claim 129, wherein said electrically conductive layer is a coating of electrically conductive material disposed on an inside surface of said housing.

131. The vehicle rearview assembly of claim 127 and further including a control circuit coupled to said telephone transceiver and supported by said mounting structure.

132. The vehicle rearview assembly of claim 131 and further including a display coupled to said control circuit and supported by said mounting structure.

133. The vehicle rearview assembly of claim 132 and further including a microphone supported by said mounting structure and coupled to said telephone transceiver.

134. The vehicle rearview assembly of claim 132 and further including an antenna supported by said mounting structure and coupled to said telephone transceiver.

135. The vehicle rearview assembly of claim 127, wherein said rearview mirror exhibits an electromagnetic interference level less than about 51 dBμV/m for emissions in the frequency range from about 0.4 MHz to about 20 MHz.

136. The vehicle rearview assembly of claim 127, wherein said rearview mirror exhibits an electromagnetic interference level less than about 41 dBμV/m for emissions in the frequency range from about 0.4 MHz to about 20 MHz.

137. A vehicle rearview assembly for providing an image of a scene to the rear of a driver, said rearview assembly comprising:

a mounting structure for mounting to the vehicle, said mounting structure including a housing having an electrically conductive layer; and

a telephone transceiver mounted within said housing.

138. The vehicle rearview assembly of claim 137, wherein said rearview assembly exhibits an electromagnetic interference level less than about 41 dBμV/m for emissions in the frequency range from about 0.4 MHz to about 20 MHz.

139. The vehicle rearview assembly of claim 137, wherein said electrically conductive layer is a coating of electrically conductive material disposed on an inside surface of said housing.

140. The vehicle rearview assembly of claim 137, wherein said housing is made of plastic.

141. A telephone system for use in a vehicle having a stereo audio system with at least two speakers disposed on opposite sides of the vehicle interior, said speakers configured to play back one of two stereo audio signals output from an audio receiver, said telephone system comprising:

a telephone transceiver mounted in the vehicle and having an audio output through which an audio signal is transmitted for playback on the stereo audio system;

a microphone coupled to said telephone transceiver and mounted in the interior of the vehicle between the at least two speakers; and

a phase inverter coupled to said audio output of said telephone transceiver and to the audio receiver such that said audio receiver provides the speaker disposed on one side of the vehicle with an audio signal whose phase is inverted relative to an audio signal provided to the speaker disposed on the opposite side of the vehicle.

142. A method of configuring a hands-free telephone system in a vehicle, the method comprising:

providing first and second speakers for generating audible sounds in response to an electrical signal;

providing a microphone in between the first and second speakers;

coupling the microphone and the first and second speakers to a telephone transceiver;

providing an audio output signal originating from the telephone transceiver to the first speaker; and

inverting the phase of the audio output signal and providing the inverted signal to the second speaker.

143. The method of claim 142, wherein the step of providing a microphone includes providing the microphone on a rearview mirror assembly.

144. A telephone system for use in a vehicle comprising:

an audio speaker;

a telephone transceiver mounted in the vehicle and having an audio output coupled to said audio speaker for delivering an audio output signal for playback on said speaker;

an acoustic port acoustically coupled to said speaker so as to project sounds generated by said audio speaker that are out of phase with respect to the same sounds generated at said audio speaker; and

a microphone coupled to said telephone transceiver and positioned between said audio speaker and said acoustic port.

145. The telephone system of claim 144, wherein at least one of said telephone transceiver and said microphone is mounted to a rearview mirror assembly of the vehicle.

146. A traffic light warning system for a vehicle comprising:

a display device;

a receiver for receiving a signal from a traffic light proximate the vehicle, the signal indicating the status of the traffic light; and

a control circuit coupled to said receiver and to said display device for displaying the status of a traffic light on the display device.

147. The traffic light warning system of claim 146 and further including a rearview assembly for providing an image of a scene to the rear of a driver of the vehicle, wherein said display device is supported by said rearview assembly.

148. The traffic light warning system of claim 146, wherein said display device displays a red light when the traffic light is red, a yellow light when the traffic light is yellow, and a green light when the traffic light is green.

149. A heading indication system for a vehicle comprising:

a microwave receiver configured to receive signals from a global position satellite constellation;

a turn sensor for sensing turning of the vehicle;

a control circuit coupled to said microwave receiver and to said turn sensor for determining vehicle heading from signals received from said microwave receiver and for generating a control signal representative of the vehicle heading, wherein, when said control circuit determines that the vehicle heading has changed based upon the signals received from said microwave receiver and when said turn sensor does not sense that the vehicle has turned, said control circuit does not change the control signal thereby indicating that the vehicle heading has not changed; and

a heading indictor coupled to said control circuit for providing an indication of the vehicle heading in response to the control signal.

150. The heading indication system of claim 149, wherein said microwave receiver is a GPS receiver.

151. The heading indication system of claim 149, wherein said turn sensor is a gyroscope.

152. The heading indication system of claim 149, wherein said turn sensor includes wheel speed sensors.

153. The heading indication system of claim 149, wherein, following a determination that the vehicle heading has changed based upon the signals received from said microwave receiver and that said turn sensor does not sense that the vehicle has turned, said control circuit monitors the signals received from said microwave receiver for a predetermined time period and, if the vehicle heading derived from the signals provided by said microwave receiver does not change during the predetermined time period, said control circuit changes the control signal to represent the heading derived from the signals received from said microwave receiver.

154. The heading indication system of claim 149 and further including a rearview mirror assembly configured to mount to the vehicle, wherein one of said microwave receiver and control circuit is mounted on said rearview mirror assembly.

155. A network-aided navigation system for a vehicle comprising:

a microwave receiver configured to receive signals from a global position satellite constellation; and

a wireless communication transceiver coupled to said microwave receiver for transmitting signals corresponding to the signals received by said microwave receiver to a network processor, and for receiving signals from the network processor from which the location of the vehicle may be derived.

156. The network-aided navigation system of claim 155 and further including:

a control circuit coupled to said wireless communication transceiver, said control circuit being responsive to the signals received by said wireless communication transceiver to generate a control signal representing a heading of the vehicle; and

a heading indicator coupled to said control circuit for receiving the control signal and indicating the vehicle heading.

157. The network-aided navigation system of claim 156, wherein said heading indicator is a display.

158. The network-aided navigation system of claim 157 and further including a rearview mirror assembly, wherein at least one of said control circuit, display, wireless communication transceiver, and microwave receiver is mounted to said rearview mirror assembly.

159. The network-aided navigation system of claim 155 and further including a rearview mirror assembly, wherein at least one of said wireless communication transceiver and said microwave receiver is mounted to said rearview mirror assembly.

160. The network-aided navigation system of claim 155, wherein said wireless communication transceiver is a telephone transceiver.

161. A navigation system for a vehicle comprising:

a control circuit for supplying travel directions; and

a speech synthesizer coupled to said control circuit for receiving the travel directions and for reproducing the travel directions in an audible speech message.

162. The navigation system of claim 161 and further including a rearview mirror assembly, wherein at least one of said control circuit and said speech synthesizer is mounted to said rearview mirror assembly.

163. The navigation system of claim 161 and further including a microwave receiver coupled to said control circuit and configured to receive signals from a global position satellite constellation.

164. The navigation system of claim 163 and further including a rearview mirror assembly, wherein at least one of said control circuit, said speech synthesizer, and said microwave receiver is mounted to said rearview mirror assembly.

165. The navigation system of claim 161 and further including a wireless communication receiver coupled to said control circuit.

166. The navigation system of claim 165 and further including a rearview mirror assembly, wherein at least one of said control circuit, said speech synthesizer, and said wireless communication receiver is mounted to said rearview mirror assembly.

167. A navigation system for a vehicle comprising:

a navigation circuit for providing navigational information to a driver of the vehicle based in part on information stored in a navigation database; and

a wireless communication transceiver coupled to said navigation circuit for receiving navigational data from a remote source and for supplying the received navigational data to said navigation circuit for storage in said navigation database.

168. The navigation system of claim 167, wherein the remote source from which navigation data is retrieved and transmitted to said wireless navigation circuit is the Internet.

169. The network-aided navigation system of claim 167 and further including a rearview mirror assembly, wherein at least a portion of said wireless communication transceiver is mounted to said rearview mirror assembly.

170. The network-aided navigation system of claim 167, wherein said wireless communication transceiver is a telephone transceiver.

171. A blackbox recorder for a vehicle comprising:

a camera mounted to the vehicle for imaging a scene proximate or within the vehicle; and

a non-volatile memory device for storing information pertaining to the vehicle including at least one image obtained from said camera.

172. The blackbox recorder of claim 171 and further including:

a volatile memory device for storing a sequence of images obtained by said camera; and

a control circuit coupled to said volatile memory device and said non-volatile memory device for determining when a vehicle crash has occurred and for transferring at least one image stored in said volatile memory into said non-volatile memory when a crash has occurred.

173. The blackbox recorder of claim 171, wherein said non-volatile memory device further stores information pertaining to the vehicle including at least one of vehicle speed history, vehicle rollover indication, air bag deployment indication, and deceleration data.

174. The blackbox recorder of claim 171, wherein at least one of said camera and said non-volatile memory device is mounted to a rearview mirror assembly of the vehicle.

175. A blackbox recorder for a vehicle comprising:

a camera mounted to the vehicle for imaging a scene proximate or within the vehicle;

a memory device for storing information pertaining to the vehicle including at least one image obtained from said camera; and

a back-up battery for providing power to the blackbox recorder in the event of a disruption of power supplied from a primary power source in the vehicle.

176. The blackbox recorder of claim 175, wherein at least one of said camera, said back-up battery, and said memory device is mounted to a rearview mirror assembly of the vehicle.

177. A blackbox recorder for a vehicle comprising a memory device for storing information pertaining to the vehicle including at least one of vehicle speed history, vehicle rollover indication, air bag deployment indication, and deceleration data.

178. The blackbox recorder of claim 177 and further including a wireless communication transceiver for reading the information stored in said memory device and transmitting the information to a remote emergency services facility.

179. The blackbox recorder of claim 177, wherein said memory device is mounted to a rearview mirror assembly of the vehicle.

180. A vehicle rearview assembly for providing an image of a scene to the rear of the driver of the vehicle, said rearview assembly comprising:

a first switched power supply operating at a first frequency; and

a second switched power supply operating at a second frequency, wherein said first frequency is a multiple of said second frequency and said first and second switched power supplies are synchronized.

181. The vehicle rearview assembly of claim 180, wherein said first switched power supply provides power at a first voltage and said second switched power supply provides power at a second voltage different from said first voltage.

182. A rearview assembly for providing an image of a scene to the rear of the driver of a vehicle, said rearview assembly comprising:

a housing for housing an imaging component that provides the image of a scene to the rear of the driver of the vehicle; and

a mounting bracket for mounting said housing to the vehicle, said mounting bracket having two rotary joints,

wherein said housing has a mass in excess of 580 grams.

183. The rearview assembly of claim 182, wherein said imaging component is a mirror.

184. The rearview assembly of claim 183, wherein said mirror is an electrochromic mirror.

185. A rearview assembly for providing an image of a scene to the rear of the driver of a vehicle, said rearview assembly comprising:

a mounting structure adapted for mounting to the vehicle;

a pushbutton mounted on said mounting structure; and

a control circuit coupled to said pushbutton for performing a selected function in response to actuation of said pushbutton, wherein said control circuit is programmable to allow personalization of the selected function that is performed in response to actuation of said pushbutton.

186. A rearview assembly for providing an image of a scene to the rear of the driver of a vehicle, said rearview assembly comprising:

a mounting structure adapted for mounting to the vehicle;

a pushbutton mounted on said mounting structure;

a control circuit coupled to said pushbutton for performing a selected function and generating a display signal representing the function to be performed in response to actuation of said pushbutton; and

a display supported by said mounting structure and coupled to said control circuit for displaying the function to be performed by said control circuit a mounting structure adapted for mounting to the vehicle;

a pushbutton mounted on said mounting structure; and

a control circuit coupled to said pushbutton for performing a selected function in response to actuation of said pushbutton, wherein said control circuit is programmable to allow personalization of the selected function that is performed in response to actuation of said pushbutton.

187. The rearview assembly of claim 186, wherein said control circuit is programmable to allow personalization of the selected function that is performed in response to actuation of said pushbutton.

188. A rearview assembly for providing an image of a scene to the rear of the driver of a vehicle, said rearview assembly comprising:

a housing for housing an imaging component that provides the image of a scene to the rear of the driver of the vehicle; and

a mounting bracket for mounting said housing to the vehicle,

wherein said housing includes a contoured wall defining an interior cavity, said wall having a thickness that is non-uniform and that is greater at a central region to which said mounting bracket attaches to said housing than at other regions of said housing.

189. The rearview assembly of claim 188, wherein said imaging component is a mirror.

190. The rearview assembly of claim 189, wherein said mirror is an electrochromic mirror.

191. The rearview assembly of claim 188, wherein said mounting bracket has two rotary joints, and said housing has a mass in excess of 580 grams.

192. A rearview assembly for providing an image of a scene to the rear of the driver of a vehicle, said rearview assembly comprising:

a mounting structure for mounting to the vehicle; and

a display circuit supported by said mounting structure for displaying information to occupants of the vehicle, said display circuit configured to display at least ten characters simultaneously and to operate at a voltage of less than 42 volts.

193. The rearview assembly of claim 192, wherein said display circuit is configured to display at least sixteen characters simultaneously.

194. The rearview assembly of claim 192, wherein said display circuit includes at least ten multi-segmented character display regions.

195. The rearview assembly of claim 194, each said multi-segmented character display regions includes at least seven segments.

196. The rearview assembly of claim 192, wherein said display circuit includes a switched power supply.

197. A telephone system for a vehicle comprising:

a transparent antenna including a transparent substrate having at least one electrically conductive region configured to receive RF signals from a wireless telephone network and to transmit RF signals to the wireless telephone network; and

a telephone transceiver coupled to said transparent antenna and mounted in the vehicle.

198. The telephone system of claim 197, wherein said telephone transceiver is mounted to a rearview mirror assembly of the vehicle and said transparent antenna is mounted to a window of the vehicle.

199. A global position system for a vehicle comprising:

a transparent antenna including a transparent substrate having at least one electrically conductive region configured to receive microwave signals from satellites of a global position system constellation; and

a microwave receiver coupled to said transparent antenna and mounted in the vehicle.

200. The global position system of claim 199, wherein said microwave receiver is mounted to a rearview mirror assembly of the vehicle and said transparent antenna is mounted to a window of the vehicle.